

Commonwealth Research Commercialization Fund

and

Research & Technology Strategic Roadmap

Higher Education Advisory Committee

October 18, 2011

Peter Jobse, CIT CEO

CRCF Legislation



§ 2.2-2221.2. Commonwealth Research and Technology Strategic Roadmap

Develop the Roadmap...to use to identify research areas worthy of institutional focus and Commonwealth investment in order to promote commercialization and economic development efforts in the Commonwealth

§ 2.2-2233.1. Commonwealth Research Commercialization Fund

Awards from the Fund shall only be made to applications that further the goals set forth in the Commonwealth Research and Technology Strategic Roadmap

CRCF Appropriation



- Commonwealth Research Commercialization Fund
- \$10M appropriated for FY2012
 - \$4M for CIT GAP Fund
 - \$2M for SBIR Phase I NIH matching program
 - \$4M for other programs
 - Matching Funds
 - Facilities Enhancement Loan
 - Commercialization
 - Eminent Researcher Recruitment

R&T Roadmap



- Identify key industry sectors for potential investment
- Identify basic and applied research opportunities with commercial promise in these sectors
- Encourage commercialization and economic development in these sectors
- Help ensure that investments in research are made prudently in focused areas with significant potential for commercialization and economic growth

Preliminary Findings



Wireless RF

Cognitive radio

Nuclear plant life

Med isotopes

Integrated comms

Sensor / measurement

Power electronics

Remote patient care

Intermodal ports

Smart sensing

 Energy storage Biomass conversion

Drug research

Biothreat defense

Information assurance

Educational software

Cyber security

National defense

Smart grid

Semiconductors

Bioinformatics

Health IT

Defense intelligence

Cyber security

Information assurance

Biotech

Health IT

Med devices

Secure telework

Defense logistics

Cyber security

Information assurance

Green tech

Green construction

Smart construction

Bioinformatics

Cyber security

Data management / analytics

Smart grid and analytics

Surface engineering

Biotechnology

Med devices

Coal bed methane conversion

Biomass

Plug-less power

Personalized medicine

Tobacco-cultured vaccine

Application software

Health IT

Data imaging

Hybrid conversion

Energy storage

Energy mining

Nano solar cells

M&S

National defense / homeland security

Smart grid and analytics

Semiconductors

Aerospace

Health IT

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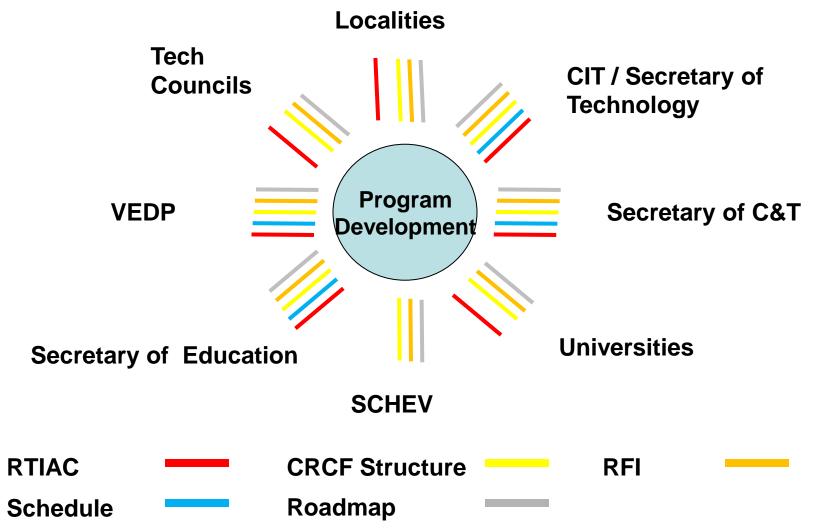
Roadmap / CRCF Intersection



- Industry Opportunities / Eligible Sectors
 - Advanced Manufacturing
 - Aerospace
 - Communications
 - Energy
 - Environment
 - Information Technology
 - Life Sciences
 - Modeling and Simulation
 - Nuclear Physics
 - Transportation
 - www.cit.org/programs/cit-rd/roadmap

CRCF Development





CRCF Demand Survey



- 305 projects / 218 individuals / 144 entities
- \$120M requested; request range \$8K \$10M
- Technology sectors: (in order of popularity; some projects listed multiple sectors)
 - Life sciences
 - Information technology
 - Energy
 - · Advanced manufacturing
 - National security

- Environment
- Aerospace / aviation
- Transportation
- Communications
- Other (e.g., tech transfer)

- Responding entities
 - For-profit companies; academia; other research institutes; federal labs; political subdivision
- Primary program interests (in order of popularity)
 - Commercialization Program for Virginia-based Organizations
 - Matching Funds Program for Academia / Other Research Institutes
 - SBIR / STTR Matching Program (non-NIH awards)
 - SBIR / STTR Matching Program (NIH awards)
 - Eminent Researcher Recruitment Program
 - Facilities Enhancement Loan Program for Academia and Political Subdivisions

RTIAC Members



Designated in Legislation			Citizen Members		
Research University	Tom Skalak	UVA	Venture Capital	Bobby Ocampo	Grotech Ventures
Research University	Dennis Manos	CWM	Venture Capital	Robert Patzig	Third Security
Research University	Mohammad Karim	ODU	Engineering Firm	Dan Gonzalez	Avison Young
Research University	John Noftsinger	JMU	Research Facility	Bob Kahn	Corporation for National Research Initiatives (CNRI)
VEDP	Jeff Anderson	VEDP, President & CEO	Technology Company	Tom Kirchmaier	General Dynamics IT (GDIT)

CRCF Timeline



- Request for Information mid-Summer 2011
- Appoint RTIAC August 2011
- Preview Roadmap / findings September 2011
- Submit Roadmap October 2011 (accelerated)
- Issue CRCF solicitation October 2011
- Announce initial awards December 2011
- Issue 2nd solicitation February 2012
- Announce awards May 2012

CIT GAP Funds – Overview



CIT GAP Fund

- Seed-stage leverage fund designed to stimulate private investment
- Three operating funds
 - GAP Tech Fund
 - BioLife Fund
 - Innovation Fund
- Investment decisions made by Investment Advisory Board
- Average projected 5 year job growth is 10X from point of investment

FY2011 summary

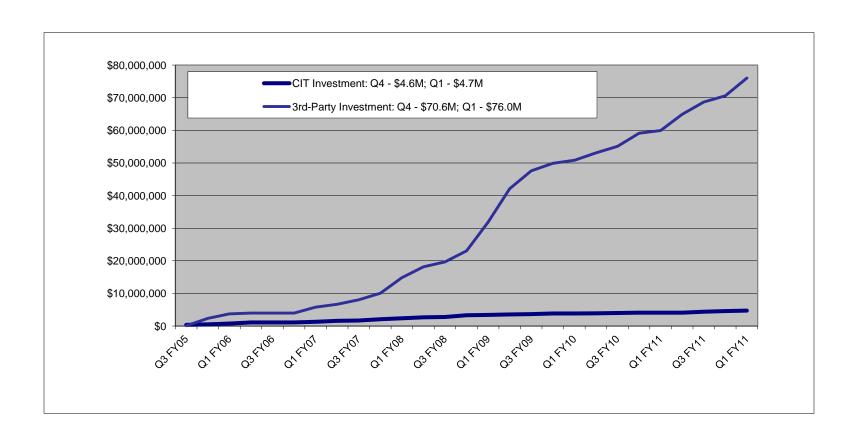
- 565 applications
- 44 review meetings held
- 15 presented to the Investment Advisory Board
- 6 new company investments placed

FY2012 projections

- 131 applications to date projecting 500+
- 21 new company investments
- 18 validation investments
- 6 energy fund investments

Private Sector Leverage





16:1 Private sector leverage - \$16 for every \$1 CIT invests

CRCF acceleration



Research and Technology Roadmap

Eminent Researchers Fund

Research Match

SBIR Match

RESEARCH PROOF OF CONCEPT OR INVENTION EARLY STAGE DEVELOPMENT PRODUCTION

GAP Fund

Commercialization Fund

Facility Enhancement Fund